

# Perioperative Anxiety

## Introduction

Anxiety is a subjective unpleasant feeling of dread over something unlikely to happen, such as the feeling of imminent death. It is often accompanied by restlessness, fatigue, problems in concentration, and muscular tension. Perioperative anxiety is described as a vague, uneasy feeling, the source of which is often nonspecific and unknown to the individual [1] but known to cause abnormal hemodynamics as a consequence of sympathetic, parasympathetic and endocrine stimulation. Perioperative period is one of the stressful events in their lifetime. It often triggers emotional, cognitive and physiological responses. It occurs in a transient form or persists as chronic form. It has propensity to produce aggressive reactions of a patient resulting in difficult postoperative pain management and compromise quality of care [2]. The goal of perioperative care is to provide better environments and quality of life of a patient before, during and after operation.

The incidence of preoperative anxiety varies according to the setting of surgery, gender of a patient, motive of surgery and many other factors. The prevalence is high; ranging from 32% for general surgery [3] to 50% in coronary artery bypass graft surgery (CABG) [4]. Prevalence is similar or even higher in Asian population [5].

## Factors Related to Perioperative Anxiety

Factors responsible for preoperative fears are depend on age, gender, single or divorce, education, uncertainty of the exact day of surgery, patient's ability to understand the events that occur during surgical anesthesia, fear of surgery, separation from their family, financial loss, postoperative pain, fear of death and fear of unknown origin [6-9]. Lack of adequate and timely information to patients during the pre-anesthetic consultation increases patient anxiety. Study done by Kiyohara et al. found that patients receiving better preanesthetic information during the visit with the anesthesiologist showed reduced rates of anxiety [10]. The day of admission can also be a very stressful, as patients have to cope with both the stress of hospitalization and the anxiety about the impending surgery.

## Psychological Response to Anxiety

The extent of anxiety levels varies individually. It fluctuates over time; starting prior to the surgery and persists until the late postoperative period. Different patient react perioperative periods in different ways. Some find it as relief as they are going to have a disease free life. Other considered it as a stressful life event. They are preoccupied with discomfort or concerned about the success of surgery, fear of failure of career, postoperative state of physical health and problems adapting to the changed situation. The consequences of perioperative anxiety are major cardiac events [11-13] (acute myocardial infarction, heart failure, pulmonary edema), high readmission rate (1<sup>st</sup> six month or one years), [11,14] poor quality of life and high rate of cardiac mortality. Impact of perioperative anxiety correlate with high postoperative pain, increased analgesic and anesthetic consumption, prolonged hospital stay, adverse effects



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on anesthetic induction and recovery, and reduction in patient satisfaction.

Reasons of increased morbidity in anxious patient are associated with the development of cardiovascular lesions as a consequences of health-related behaviors [15] (such as smoking, poor diet, poor compliance with treatment, or an inactive lifestyle) or direct influence on the myocardial perfusion, autonomic nervous system regulation, platelet activation, increased hypothalamo-pituitary-adrenal axis activity and exaggerated inflammatory processes [15-17].

Preoperative anxiety level is difficult to measure accurately. However, it can be estimated indirectly by increased blood pressure or pulse, decreased heart rate variability and patient irritability. Directly estimated with measuring the plasma cortisol or urinary catecholamine level. At present, several validated questionnaires [5] are available to measure preoperative anxiety. These include Amsterdam Preoperative Anxiety Information Scale (APAIS), the State Trait Anxiety Inventory (STAI), Hospital Anxiety and Depression Scale (HADS), Visual Analogue Scale (VAS), Multiple Affect Adjective Check List (MAACL). The APAIS is a widely accepted [5] screening tool which has been translated and used in many countries including Germany, the Netherlands, Mexico, Thailand, Turkey Korea and Japan.

## Management

All patients scheduled for surgery need to be intervened before and after surgery. Interventions before surgery include developing good rapport and doctor patient relationships, education and structured interviews, psychotherapy, and medicines like selective serotonin reuptake inhibitors or benzodiazepine. The best ways to cope with anxiety include talking their problems freely to the friends or families, and leaving everything on the god's hand. The most effective way of

reducing anxiety as mentioned by patients is to have belief on religion [9]. The routine evaluation and effective treatment of preoperative psychological distress in patients scheduled for surgery may facilitate postoperative recovery. Early intervention in postoperative period to patients with evidence of psychological distress offers reduction of hospital length of stay, analgesic use, postsurgical morbidity and help patients to adopt more effective coping strategies in their everyday lives.

## Conclusions

There are high degrees of preoperative anxiety in patients scheduled for surgery. Perioperative anxiety is often overlooked but it is associated with poor surgical outcome. At present several validated questionnaires are available to measure preoperative anxiety. Preoperative counseling and proper education regarding surgery will help in reducing anxiety and improving the quality of care.

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